DS924iPET (ITI # 60-511-02-95)
Learn Mode (LM) Wireless PIR Motion Sensor Installation Instructions

1.0 Overview

The DS924iPET is a Passive Infrared (PIR) Motion Sensor designed to detect movement in the interior of a structure by sensing the Infrared energy emitted from the human body as it moves across the Sensor's field of view. When motion is detected the unit sends an alarm signal to the Control Panel. The DS924iPET is a high performance PIR Motion Sensor which uses advanced signal processing to provide outstanding catch performance and unsurpassed false alarm immunity. The DS924iPET is designed to ignore a dog up to 40 pounds, two cats and small rodents.

2.0 Specifications

General

- Power is supplied by 3.6 VDC Lithium Battery. Saft LS14250 (0.85 AH, 1/2AA battery).
- Typical current draw is 12 micro-amps with LED disabled.
- Typical battery life is 5 years.
- Operating temperature range of +32°F to +120°F (0°C to +49°C).

PIR Motion Sensor

- Coverage area 35 ft. by 35 ft.
- Internal coverage pointability +2° to -10° Vertical and ±10° Horizontal.
- Field selectable sensitivity options of Standard, Intermediate, or High.
- Three minute transmitter lockout time after alarm extends battery life.
- Timed Walk Test Mode automatically disables LED after setup to extend battery life.
- Cover activated Tamper indication. Optional wall activated Tamper is included.

RF Transmitter

- Integral RF transmitter capable of transmitting at least 500 feet open air. (Actual acceptable transmitter range should be verified for each installation).
- Transmits low battery report (trouble) to the Control Panel.
- Transmits supervisory signal to the Control Panel every 64 minutes.
- Intended for use with listed compatible ITI Learn Mode control panels.

3.0 Installation Guidelines

Do

- Keep all sensors within 100 feet of the Control Panel. The 100 foot distance recommendation is given as a starting guideline. The LM PIR Transmitter has an open air range of at least 500 feet, but the installation environment may influence this range.
- Mount the sensor so there is a reference point (such as a wall) at the end of its detection pattern.
- Mount the sensor so that an intruder will most likely walk across the detection pattern.
- Mount the sensor 6.5 feet above the floor.
- Mount on an insulated outside wall facing in.
- Mount on a surface which is rigid and free from vibration.

Don't

- Mount in direct sunlight.
- Aim at air conditioners, heat vents, wood stoves, fireplaces, intermittent heat sources, etc.
- Aim at solar heated walls or uninsulated metal walls.
- Aim at normally moving objects (ceiling fans, pets over 40 pounds, etc.).
- Mount the sensor where it can be exposed to moisture.
- Mount in locations where the temperature may be outside the sensor's operating limits of +32°F to +120°F (0°C to +49°C).
- Mount in areas with large metallic surfaces (e.g. heating ducts) or electrical wiring which may inhibit the sensor's RF signals from reaching the Control Panel.
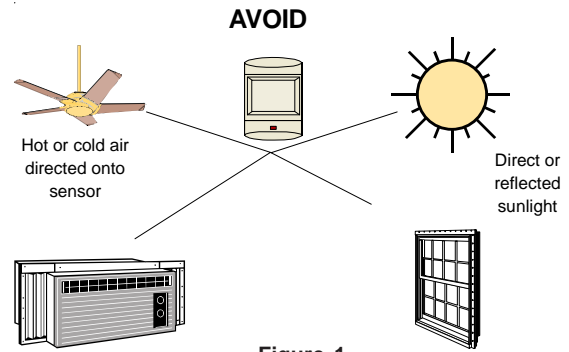- Mount in areas where the coverage may be blocked by any temporary items such as boxes or freight.

AVOID

Hot or cold air directed onto sensor

Direct or reflected sunlight

Figure 1

4.0 Mounting Procedure

4.1 Surface or Corner Mounting

IMPORTANT

For Pet Applications, surface or corner mount the detector. Do not use the optional swivel bracket.

6.5 Ft (2 M)

Don't point at stairs

Don't point where pets can climb

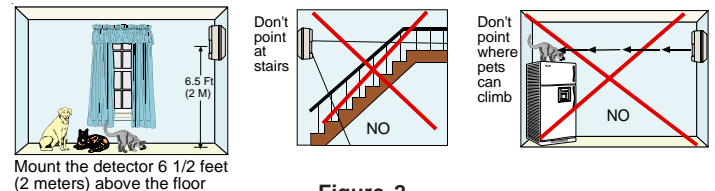Mount the detector 6 1/2 feet (2 meters) above the floor

Figure 2

- Remove the sensor's cover by gently inserting a screwdriver into the notch at the bottom of the cover.
- Completely loosen the mounting base locking screw.
- Remove the mounting plate from the enclosure by prying it up and out from the bottom.
- Punch out 2 appropriate holes in the mounting plate (for surface or corner applications).

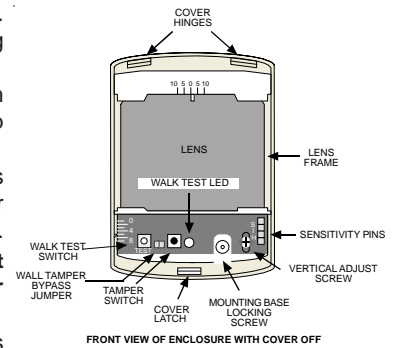**Note: The wall tamper cannot be used when corner mounting.**

- If the wall tamper function is required, remove the rectangular knockout. Locate the small spring in the hardware kit. Hold the PIR base so the battery is visible. Place the spring on the black plastic shaft of the wall tamper switch just below the battery.
- Remove the wall tamper bypass jumper located next to the walk test switch.
- Using the mounting plate as a template, mark the location of the required holes on the mounting surface.
- For installation on drywall or plaster, drill a 1/8" pilot hole to determine if a wall anchor is required.
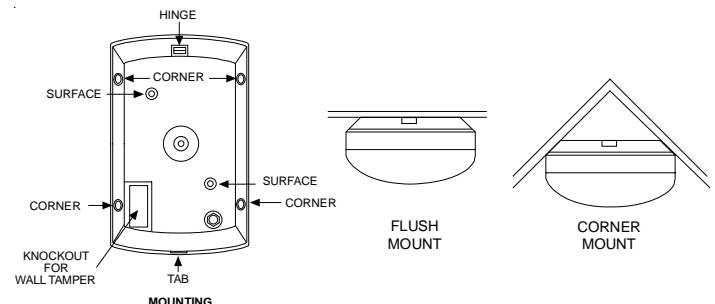- Secure the mounting plate to the wall with the #6 x 1" wood screws provided.

COVER HINGES

LENS

LENS FRAME

WALK TEST LED

WALK TEST SWITCH

SENSITIVITY PINS

WALL TAMPER BYPASS JUMPER

TAMPER SWITCH

COVER LATCH

MOUNTING BASE LOCKING SCREW

VERTICAL ADJUST SCREW

FRONT VIEW OF ENCLOSURE WITH COVER OFF

Figure 3

HINGE

SURFACE

CORNER

CORNER

SURFACE

CORNER

KNOCKOUT FOR WALL TAMPER

TAB

MOUNTING

FLUSH MOUNT

CORNER MOUNT

Figure 4

BOSCH

4.2 Attaching the Enclosure

- Attach the PIR base to the mounting plate and tighten the mounting plate locking screw.
- Replace the cover, engaging the top first then securing the bottom latch.
- For added security, the cover may be locked to the base latch using the small screw provided. The screw hole in the bottom of the cover must be knocked out prior to replacing the cover.

5.0 Programming

General Guidelines

- Put the Control Panel in program mode.
- Trip the sensor's tamper switch by removing its cover.
- Restore the tamper by replacing the sensor's cover.

Refer to the appropriate Control Panel installation manual for specific instructions on programming this device.

6.0 Walk Testing

6.1 Setup

Loosen the vertical adjust screw and set the vertical adjustment to -4°.

Figure 5

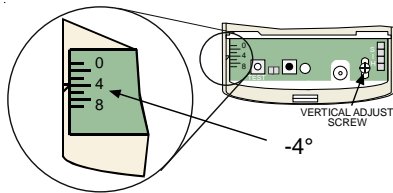### 6.2 Sensitivity Selection

- Locate the sensitivity pins. Move the shorting jumper to the appropriate pair of pins.
- If the shorting jumper is not used or placed incorrectly, the sensor defaults to Intermediate sensitivity.

Standard sensitivity is required for Pet Applications. This setting is the most tolerant of environmental extremes.

Intermediate sensitivity should be used for any location where an intruder is expected to cover only a small portion of the protected area. This setting tolerates normal environments. **Do not use this setting for Pet Applications.**

High sensitivity should only be used in quiet environments where thermal and illumination transients are not anticipated. This setting has the fastest response to intruder signals. **Do not use this setting for Pet Applications.**

6.3 Pattern Testing

Pressing the Walk Test Switch will start a 90 second Walk Test Mode. During this Test Mode, any activity in the sensor's coverage pattern will cause a transmitted alarm and LED activation. Each alarm will also extend the Test Mode for an additional 90 seconds.

Walk Testing should be done across the coverage pattern. The edge of the coverage pattern is determined by the first flash of the LED. This may change slightly depending upon the sensitivity setting. Walk Test the unit from both directions to determine the pattern boundaries.

Note: Excessive use of the Walk Test Mode may reduce battery life. Use only for initial setup and maintenance testing.

The detection pattern may be shifted ±10 degrees horizontally by rotating the lens left or right to the appropriate marks on the lens frame.

6.4 Final Testing

Turn on all heating and air conditioning sources which would normally be active during the protection period. Stand away from the sensor and outside the coverage pattern and watch for alarms.

After setup and tests are completed, and there has been no activity in the sensor's coverage pattern for approximately 90 seconds, the LED will flash to indicate that the Walk Test mode is ending.

Note: When the Walk Test Mode has ended, an alarm can be transmitted only after three (3) minutes have passed since the previous alarm. This 3 minute lockout time reduces unnecessary RF transmissions in high traffic areas thereby extending battery life.

6.5 Maintenance

At least once a year, the range and coverage should be verified for proper operation. To assure daily operation, the end user should be instructed to walk through the far end of the coverage pattern to verify an alarm output prior to arming the system.

6.6 Battery Installation

The sensor is normally shipped with its battery installed. If battery replacement is necessary observe proper polarity when installing a new battery or the sensor may be damaged. When the battery is replaced, wait at least 5 minutes after installing battery before activating the Walk Test Mode.

7.0 RF Testing

The actual RF transmitter range can be determined by performing a Dealer Sensor Test as follows:

- Remove the sensor's cover and press the Walk Test Switch. Refer to Figure 3 for the switch location.
- Replace the sensor's cover.
- Using the appropriate touchpad for the Control Panel, enter the Dealer Sensor Test Code.
- Move across the detection pattern until the sensor's LED turns on. STOP your motion.
- Note the number of siren beeps indicating how many RF packets the control panel received from the sensor. You should hear 7-8 beeps. If you hear 6 or fewer beeps, relocate the sensor and retest.

8.0 FCC Notice

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference, including interference that may cause undesired operation.

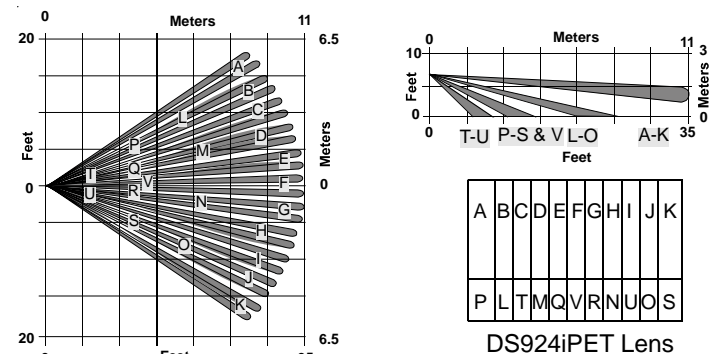## 9.0 Coverage Patterns

DS924iPET Lens

Figure 6

Changes or modifications not expressly approved by Interactive Technologies, Inc. can void the user's authority to operate the equipment.

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